GOVERNMENT OF INDIA
ATOMIC ENERGY
LOK SABHA

UNSTARRED QUESTION NO:2377
ANSWERED ON:30.11.2016
Reserves of Uranium And Thorium
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Will the Minister of ATOMIC ENERGY be pleased to state:

(a)Whether there are large reserves of uranium and thorium in the country which have not been utilised;

(b)if so, the State-wise details thereof; and

(c)the action taken/being taken by the Government to extract and utilize these vast reserves?

Answer

THE MINISTER OF STATE FOR PERSONNEL, PUBLIC GRIEVANCES & PENSIONS AND PRIME MINISTER'S OFFICE (DR. JITENDRA SINGH):

(a)Yes, Sir.

(b)The Atomic Minerals Directorate for Exploration and Research (AMD), a constituent unit of Department of Atomic Energy (DAE), has a mandate to identify and evaluate resources of atomic minerals including that of uranium and thorium in the country. During the last six and half decades, AMD has carried out survey and exploration for uranium and thorium resources in different states of the country and identified substantial resources. AMD has so far established 2,44,947 tonne (t)in situ U_3O_8 (2,07,715 t U) and about 1.07 million tonne (Mt) ThO_2 contained in 11.935 Mt monazite (mineral containing thorium and rare earths) as on October, 2016. State-wise details of the uranium resource are given below:

State Uranium reserves
U_3O_8 (t) U (t)
Andhra Pradesh 1,18,852 1,00,786
Telangana 18,550 15,731
Jharkhand 64,392 54,604
Meghalaya 23,040 19,538
Rajasthan 9,421 7,989
Karnataka 4,682 3,970
Chhattisgarh 3,986 3,380
Uttar Pradesh 785 666
Uttarakhand 100 85
Himachal Pradesh 784 665
Maharashtra 355 301
Total 2,44,947 2,07,715

[1 t U_3O_8 = 0.848 t uranium metal (U)]

The total resource of monazite is contained in 128 deposits. State-wise details of in situ monazite resource is given below:

State No. of deposits Resource (Mt)
Odisha 10 2.41
Andhra Pradesh 26 3.72
Tamil Nadu 51 2.46
Kerala 35 1.90
West Bengal 1 1.22
Jharkhand 1 0.22
Maharashtra 3 0.002
Gujarat 1 0.003
Total 128 11.935

Monazite from these placer sands contains about 9-10% ThO_2.

(c)The uranium deposits established by AMD are mined and processed for recovery of uranium by Uranium Corporation of India

Limited (UCIL), a Public Sector Undertaking (PSU) of Department of Atomic Energy (DAE). The deposits at Jaduguda, Narwapahar, Bagjata, Bhatin, Banduhurang, Turamdih and Mohuldih in Jharkhand and Tummalapalle in Andhra Pradesh are currently under commercial exploitation by UCIL. Mining at Gogi, Karnataka and Rohil, Rajasthan are at exploratory stage. Efforts are being made to initiate exploitation of deposits at Lambapur-Peddagattu, Telangana and KPM (Domiasiat) and Wahkyn, Meghalaya.

Indian Rare Earths Limited (IREL), a PSU under DAE has been producing monazite, a mineral containing thorium, from its mining and mineral separation plants located at Chavara, Kerala, Manavalakurichi, Tamil Nadu and Orissa Sand Complex, Odisha. Indigenous efforts towards development and demonstration of Thorium-based reactor technology are in experimental stage.

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